



MacBook Core Duo Heat Sink Replacement

MacBook Core Duo processor heat sink replacement.

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INTRODUCTION

The heat sink helps keep the processor cool and happy. If your MacBook's CPU is no longer cool or happy, it could be a problem with the heat sink.



TOOLS:

- [Arctic Silver ArctiClean](#) (1)
- [Arctic Silver Thermal Paste](#) (1)
- [Coin](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Spudger](#) (1)



PARTS:

- [MacBook Heat Sink \(Four-wall Connectors\)](#) (1)
- [MacBook Heat Sink \(Three-wall Connectors\)](#) (1)

Step 1 — Battery



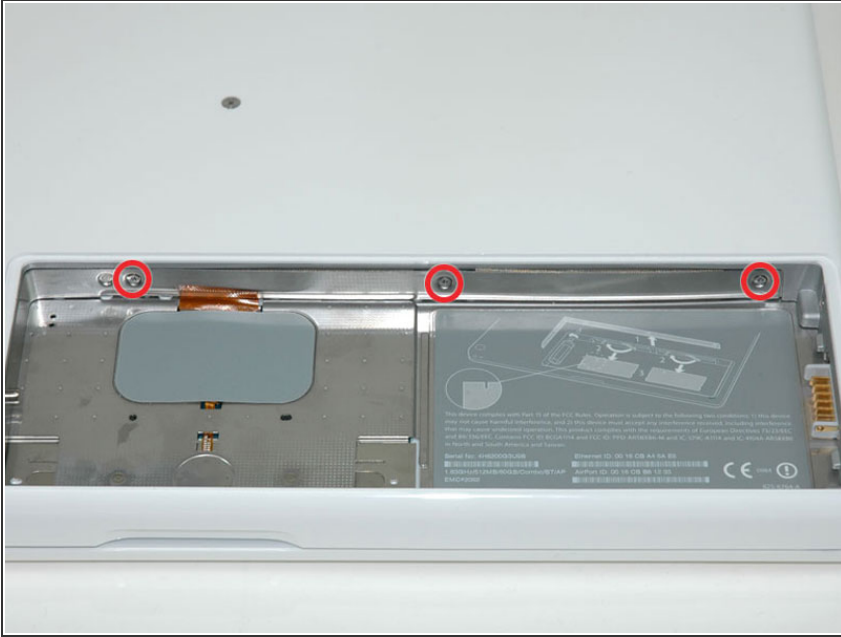
- Use a coin to rotate the battery-locking screw 90 degrees clockwise.

Step 2



- Lift the battery out of the computer.

Step 3 — Memory Cover



- Remove the three evenly-spaced Phillips screws from along the rear wall of the battery compartment.
- ☑ The screws are captive to the metal memory cover.
- ☑ When replacing the battery casing, use a spudger to re-insert the foam cushioning behind the rear wall for proper battery spacing.

Step 4



- Lift up on L-shaped memory cover, slide it to the right, and lift it out of the computer.

Step 5 — Upper Case



- Remove the following 3 screws:
 - One 11 mm Phillips #00 in the middle of the case.
 - Two 14.5 mm Phillips #00.
- ⓘ If the screws stick in the case, you can use a magnetized screwdriver to draw them out.
- ☑ The shorter of the three screws goes in the middle.

Step 6



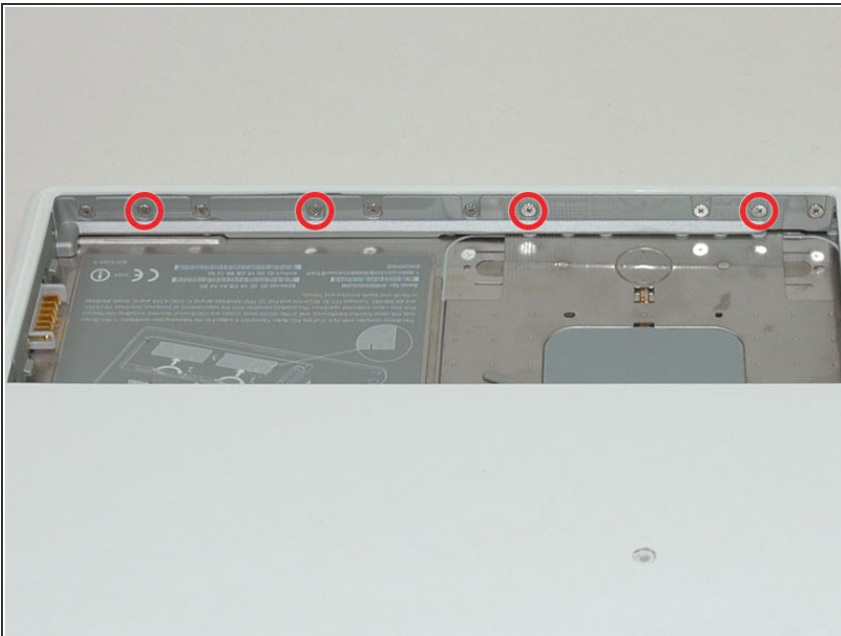
- Remove the following 3 screws from the rear wall of the battery compartment:
 - Two 3 mm Phillips #00. (A1181 has three 3 mm screws and one 4 mm.)
 - One 4 mm Phillips #00 on the right side.
- ☑ When reinstalling these screws, press gently on the lower case to line up the screw holes.

Step 7



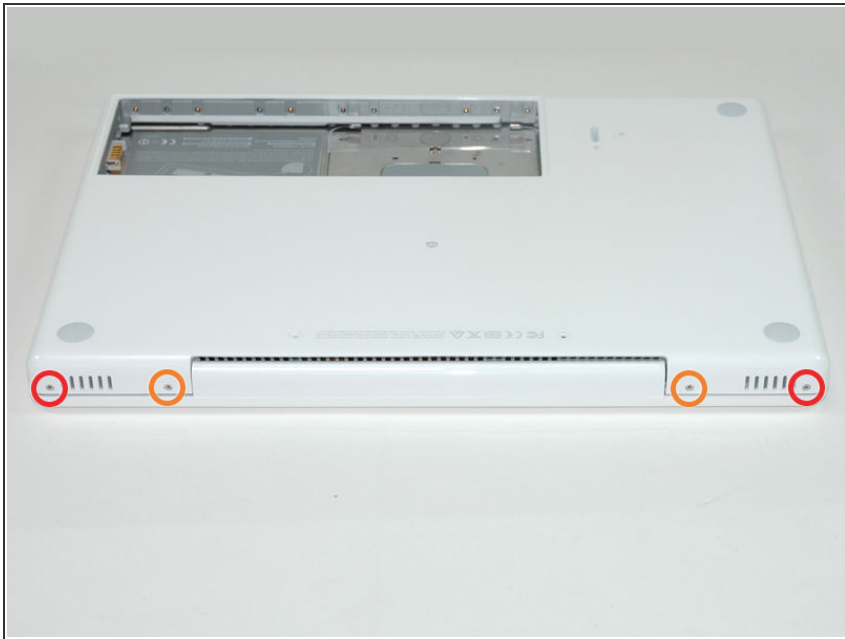
- Remove the two 6 mm Phillips #00 screws from either side of the right wall of the battery compartment (not the ones closest to the battery connector).

Step 8



- Remove the four 3 mm indicated Phillips #00 screws from the front wall of the battery compartment. When working from the left, remove the 2nd, 4th, 7th and 9th screw.

Step 9



- Remove the following 4 screws from the back of the computer:
 - Two 7 mm shouldered Phillips on the far sides.
 - Two 10.5 mm Phillips toward the center.
- ⓘ Do not over-tighten these; you can cause the case to distort.

Step 10



- Remove the two 5.2 mm shouldered Phillips #00 screws from the optical side of the computer.
- ⓘ It is not necessary to remove the similar screws on the other side of the computer.

Step 11

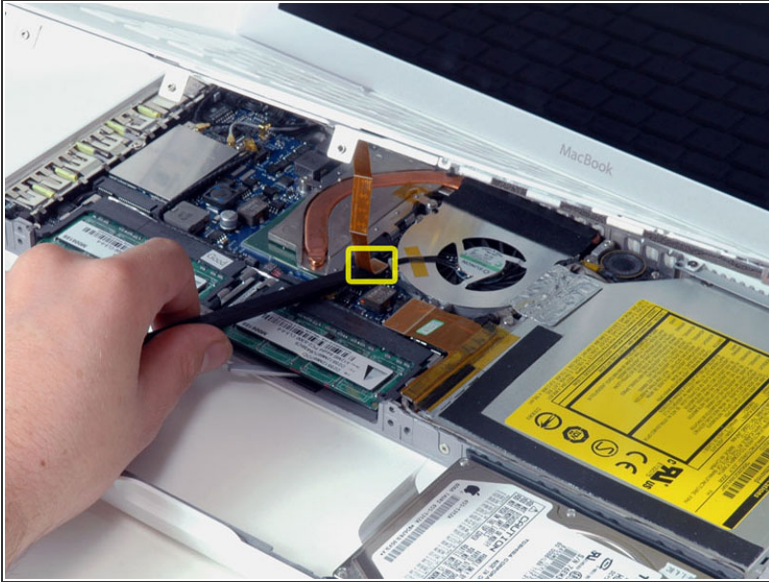


- Starting near the display and working around to the front of the computer, pry up on the upper case. It is held with clips on the right above the optical drive. These will release with some firm lifting pressure.
- Be careful when prying up the upper case. It's very easy to slice open a fingertip and thus provide the blood sacrifice the Mac gods sometimes require of those who insist on doing their own repairs.

⚠ There's a trackpad and keyboard ribbon connecting the upper case to the logic board, so don't pull the upper case off entirely just yet.

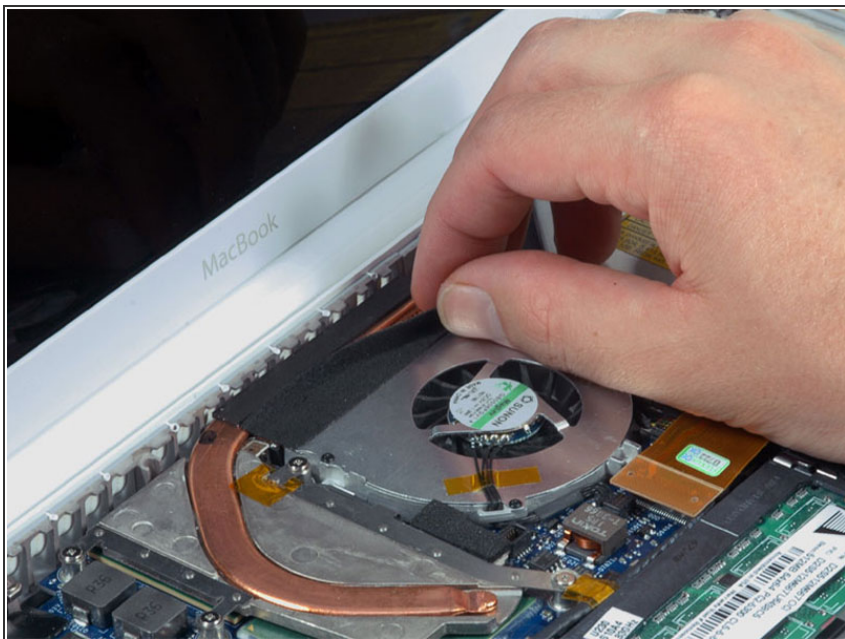
ⓘ If you have trouble getting the clips to release, be careful that you are not prying the plastic top of the upper case away from its metal frame.

Step 12



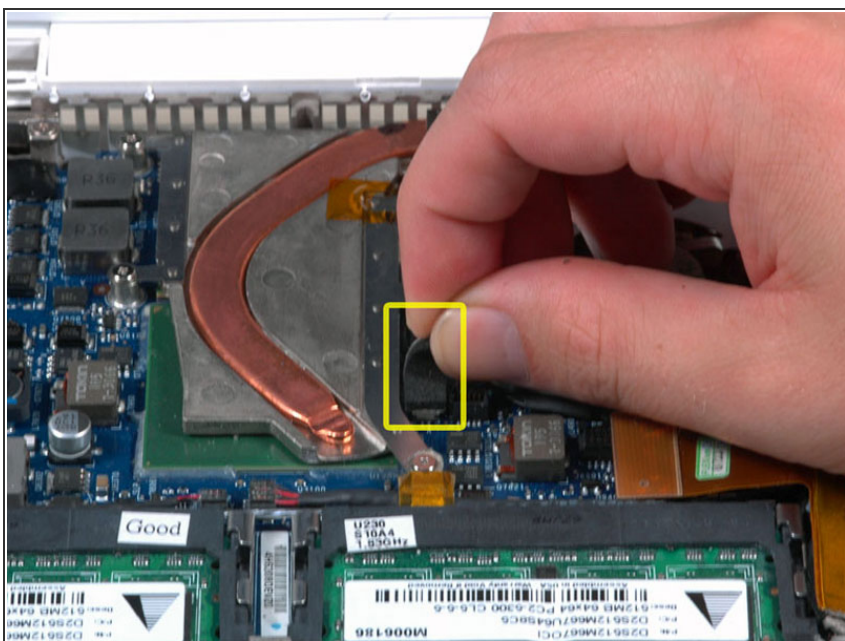
- While holding up the upper case (from the bottom or the top), use a spudger to pry up the orange trackpad and keyboard cable from its connector.
- ⓘ Take care to pry between the black socket and the white connector. You might have to pry on both sides for it to release properly.
- ⚠ Do not pry from the bottom or the top, but from the sides.
- ⓘ If you happen to break your upper case cable when removing the upper case, we stock the [cable](#) individually and we have a [guide](#) that makes replacing it easy.

Step 13 — Heat Sink



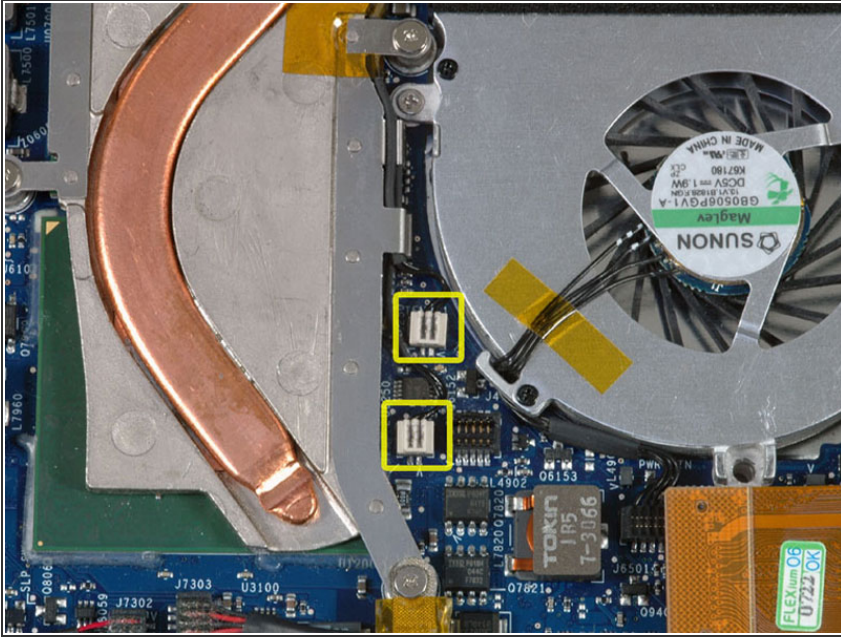
- Carefully peel up the black felt tape between the heat sink and fan.

Step 14



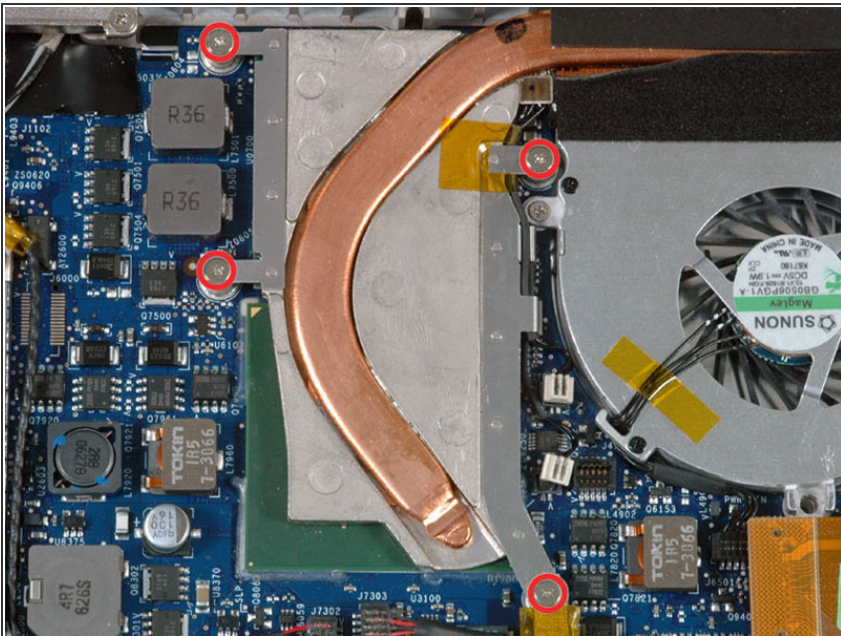
- Peel up the small black rubber cover from the right side of the heat sink.

Step 15



- Disconnect the two newly-revealed temperature sensor connectors from the logic board.

Step 16



- Remove the four Phillips screws securing the heat sink to the lower case.
- ☑ Be sure to secure ground loop for the speaker cable beneath the screw in the lower right corner.

Step 17



- Lift the heat sink out of the computer, making sure that the black tape doesn't catch on the heat sink.
- ⓘ If you need to mount the heat sink back into the laptop, we have a [thermal paste guide](#) that makes replacing the thermal compound easy.

To reassemble your device, follow these instructions in reverse order.

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